Abstract

The present invention provides a switching power source and a semiconductor integrated circuit which realize an acquisition a sufficient driving voltage of a high-potential side switching element M1 even when a power source voltage VDD is low. In a switching power source which controls a current which flows in an inductor through a switching element which performs a switching operation in response to a PWM signal, and forms an output voltage by a capacitor which is provided in series in the inductor, a booster circuit which is constituted of a bootstrap capacity and a MOSFET is provided between an output node of the switching element and a predetermined voltage terminal, the boosted voltage is used as an operational voltage of a driving circuit of the switching element, another source/drain region and a substrate gate are connected with each other such that when the MOSFET is made to assume an OFF state, and a junction diode between one source/drain region and the substrate gate is inversely directed with respect to the boosted voltage which is formed by the bootstrap capacity.